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| 09/774,885 | 02/01/2001 | Scott Keller | Q62892 | 3182 |

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EXAMINER

DO, ANH HONG

ART UNIT PAPER NUMBER

2627

DATE MAILED: 01/30/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/774,885

Applicant(s)

KELLER ET AL.

Examiner

ANH H. DO

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 21 December 2005.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-28 is/are pending in the application.
- 4a) Of the above claim(s) 2 is/are withdrawn from consideration.
- 5) ☒ Claim(s) 5,8-10 and 18-21 is/are allowed.
- 6) ☒ Claim(s) 1,3,4,6,7,11,12,14-17,22,24,27 and 28 is/are rejected.
- 7) ☒ Claim(s) 13,23,25 and 26 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Response to Arguments

1. Applicant's request for reconsideration of the finality of the rejection of the last Office action is persuasive and, therefore, the finality of that action is withdrawn.

In response to the Applicant's argument that there is no suggestion in Hiyama to control the amount of compressed data, it should be noted that Hiyama clearly teaches "when the remaining capacity of the large capacity storage medium 77 (which stores tow year irreversibly compressed image data) available for additional new image data becomes less than a predetermined amount, the control device 78 sends an alarm signal to the endoscope devices" (col. 6, lines 20-25). Thus, the system of Hiyama does need to control the compressed data amount. In other words, the compression ratio needs to be controlled. Therefore, Hiyama can be combined to Yoshida to obtain the invention as specified in claims 1 and 14.

Claim Rejections - 35 USC § 103

2. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

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3. Claims 1, 3, 4, 6, 7, 11, 12, 14-17, 22, 24, 27 and 28 are rejected under 35 U.S.C. 103(a) as being unpatentable over Hiyama et al. (U.S. Patent No. 5,361,203) in view of Yoshida et al. (U.S. Patent No. 6,690,417).

Regarding claim 1, Hiyama discloses an image storage and display system comprising an image server 6 storing image data recorded on a high readout-speed capable storage medium 70 and a display terminal 63 connected to said image server via a network (Fig. 8), wherein:

- said image server 6 is provided with a storage control means 68 that creates reversible compressed image data of the original image data, and at least one irreversible compressed image data (Fig. 8; col. 5, lines 17-26), and stores in storage medium 70 said reversible compressed image data and said irreversible compressed image data, which stand for the multiple versions of image data (Fig. 8 and col. 5, lines 26-30);

- said display terminal 63 is provided with an input means 62 capable of receiving specification of a version of the image data or the image data group to be displayed on said display terminal 63, and acquisition means 72 for acquiring the version of said image data or said image data group received in said input means (Fig. 8).

Hiyama does not disclose expressly changing a compression ratio of said irreversible compressed image data.

Yoshida discloses controlling (i.e., changing) a compression ratio of the irreversible compressed image data (col. 3, lines 43-50 and col. 31, lines 26-28).

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Hiyama & Yoshida are combinable because they are from image compression field.

At the time of the invention, it would have been obvious to a person of ordinary skill in the art to change the compression ratio of the irreversible compressed image data as taught by Yoshida in the compression system of Hiyama.

The suggestion/motivation for doing so would have been able to control the amount of image data to be stored in the memory (Yoshida, col. 3, lines 47-50, and Hiyama, col. 6, lines 20-25).

Therefore, it would have been obvious to combine Hiyama with Yoshida to obtain the invention as specified in claim 1.

Regarding claims 3 and 4, Hiyama teaches:

- wherein said storage control means 68 assigns to each version a parameter representing the image usage purpose represented by each version of image data (col. 5, lines 23-26, teaches a patient data is added to each version of the image data), and stores each version of image data in the storage medium 70 (Fig. 8);

- said input means 62 is capable of receiving specification of the version of image data as the image usage purpose represented by each version of said image data (corresponding to the patient data) (Fig. 8, and col. 5, lines 13-17);

- wherein the image recording control device 72 (corresponding to the

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claimed acquisition means) retrieves (i.e., acquires) the version of image data corresponding to the desired image usage purpose (i.e., patient data) received in input means 62 (Fig. 8 and col. 5, lines 53-56).

Regarding claim 6, Hiyama teaches:

- said storage control means 68 stores in said storage medium 70 said multiple versions of image data along with the original image data diagnosis information (Fig. 8 and col. 5, lines 50-56, teaches diagnosis information, e.g., patient examination database);

- said acquisition means 72 acquires the versions of image data and image data groups along with said diagnosis information received in input means 62 (Fig. 8 and col. 5, lines 53-56, teaches retrieving a patient data in the patient examination database).

Regarding claim 7, Hiyama teaches:

- said image server 6 is provided with a diagnosis-status management means 76 for managing the diagnosis status (i.e., the examination ID data) of said original image data (Fig. 8);

- said storage control means 68 controls, according to said diagnosis status, which versions of image data are acquired at said display terminal 63 (Fig. 8).

Regarding claim 11, although neither Hiyama nor specifically teach that the compression ratio is 1/5 to 1/50, such limitation is merely a matter of design choice and would be obvious in the combined system of Hiyama and Yoshida.

Yoshida teaches controlling (i.e., changing) a compression ratio of the

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irreversible compressed image data (col. 3, lines 43-50 and col. 31, lines 26-28).

The limitation of claim 11 does not define a patentably distinct invention over that in Hiyama and Yoshida since both the invention as a whole and Hiyama and Yoshida are directed to changing the compression ratio. The degree in which the compression ratio is changed is inconsequential for the invention as a whole and presents no new or unexpected result, so long as the compression ratio is successfully changed. Therefore, to have the compression ratio that is 1/5 to 1/50 in Hiyama and Yoshida would have been a matter of design choice to one of ordinary skill in the art.

Regarding claim 12, Hiyama discloses the subject matters in claim 5 as discussed above, but does not expressly teach the transformation. Yoshida teaches image transformation (col. 17, lines 61-64, teaching the transformation of the compressed data in the decompression/expanding process into the data in YCrCb format). The motivation is set forth in claim 1 above.

Regarding claim 14, Hiyama discloses:

- said image server 6 is provided with a storage control means 68 that creates reversible compressed image data of the original image data, and at least one irreversible compressed image data (Fig. 8; col. 5, lines 17-26), and stores in storage medium 70 said reversible compressed image data and said irreversible compressed image data, which stand for the multiple versions of image data (Fig. 8 and col. 5, lines 26-30);

- said display terminal 63 is provided with an input means 62 capable of

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receiving specification of a version of the image data or the image data group to be displayed on said display terminal 63, and acquisition means 72 for acquiring the version of said image data or said image data group received in said input means (Fig. 8).

Hiyama does not disclose expressly changing a compression ratio of said irreversible compressed image data.

Yoshida discloses controlling (i.e., changing) a compression ratio of the irreversible compressed image data (col. 3, lines 43-50 and col. 31, lines 26-28).

Hiyama & Yoshida are combinable because they are from image compression field.

At the time of the invention, it would have been obvious to a person of ordinary skill in the art to change the compression ratio of the irreversible compressed image data as taught by Yoshida in the compression system of Hiyama.

The suggestion/motivation for doing so would have been able to control the amount of image data to be stored in the memory (Yoshida, col. 3, lines 47-50, and Hiyama, col. 6, lines 20-25).

Therefore, it would have been obvious to combine Hiyama with Yoshida to obtain the invention as specified in claim 14.

Regarding claim 15, Hiyama teaches wherein said reversible compressed image data and said at least one irreversible compressed image data are stored on one physical device 70 (Fig. 8; col. 5, lines 26-30).

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Regarding claim 16, Hiyama teaches wherein the version of the image data is defined by compression type (col. 5, lines 17-23, teaching irreversible compression type).

Regarding claim 17, Hiyama teaches wherein the image data group represents a plurality of image data with the same version (col. 4, line 65 – col. 5, line 4, teaching a plurality of image data comprising the endoscope image data and the ultrasonic image data in the same version).

Regarding claim 22, Hiyama discloses the subject matters in claim 5 as discussed above, but does not expressly teach the transformation. Yoshida teaches image transformation (col. 17, lines 61-64, teaching the transformation of the compressed data in the decompression/expanding process into the data in YCrCb format). The motivation is set forth in claim 1 above.

Regarding claim 24, Hiyama teaches two irreversible compressed images (Fig. 8: image compression device 66 for creating an irreversible endoscope compressed image and an irreversible ultrasonic compressed image from the endoscope image data and the ultrasonic image data received by image data/I/O device 62).

Regarding claim 27, Hiyama discloses the storage control means 68 and the display terminal 63 is separated from the server 74 (Fig. 8).

Regarding claim 28, Hiyama discloses the input means 62 and the acquisition means 72 (Fig. 8).

Allowable Subject Matter

4. Claims 5, 8-10 and 18-21 are allowed.
5. Claims 13, 23, 25, and 26 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

6. The following is a statement of reasons for the indication of allowable subject matter:

Regarding claim 5, the prior art, either taken singly or in combination, does not teach:

- wherein said storage control means... to a progressively extractable data-compression process, and wherein said acquisition means... compressed image data.

Regarding claim 18, since it depends upon claim 5, it is also allowable for the same reason.

Regarding claims 8-10, the prior art, either taken singly or in combination, does not teach:

- deleting the original image data or the reversible compressed image data from high readout-speed capable storage medium after a predetermined period of time has elapsed.

Regarding claims 13 and 23, the prior art, either taken singly or in combination, does not teach:

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- wherein the wavelet transformation produces an image whose length and width are reduced by 1/2, and image having a lengthwise edge component, and image having a widthwise edge component and an image having a diagonal edge component.

Regarding claim 25, the prior art, either taken singly or in combination, does not teach:

- wherein the two irreversible compressed images are created using different compression ratios.

Regarding claim 26, the prior art, either taken singly or in combination, does not teach:

- wherein a plurality of compression ratios are selectable by the storage control means based on a type of apparatus creating the original image data.

Contact Information

Any inquiry concerning this communication or earlier communications from the examiner should be directed to ANH H. DO whose telephone number is 571-272-7433. The examiner can normally be reached on 5/4-9.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, DAVID K. MOORE can be reached on 571-272-7437. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

January 23, 2006



ANH HONG DO
PRIMARY EXAMINER